REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks.

Claims 1-14 have been amended editorially. Non-elected claims 15-23 have been canceled without prejudice or disclaimer.

35 USC § 112 Rejections

Claim 14 is rejected under 35 USC 112, second paragraph, for indefiniteness. Claim 14 has been amended editorially. Withdrawal of the rejection is requested.

35 USC § 102 Rejections

Claims 1-14 are rejected under 35 USC 102(b) as being anticipated by Atwood (US 5475610). Applicants respectfully traverse the rejection.

Claim 1 is directed a method of raising, to a predetermined temperature, the temperature of an object contained hermetically in a container. To attain the intended rise in temperature, a first step for measuring a temperature of the container and ambient temperature around the container is performed. The second step determines, based on the container temperature and the ambient temperature, an amount of heat energy necessary to raise the temperature of the contained object up to the predetermined temperature.

Therefore, the determination of the amount of heat energy necessary for raising the temperature of the contained object can be performed without conducting direct temperature measurement with respect to the object itself. The object is kept sealed in the container and undesired consequences can be avoided, for example, the reagents undergoing undesired evaporation (page 20, lines 15-23).

Contrary to claim 1, Atwood does not disclose that the measuring of the temperature of the sample block is performed at its heated cover, where the rejection equates the heated cover to the container temperature of the claim. The rejection erroneously contends that "the heat applied is controlled by measuring the temperature of the sample block at its heated cover (C9/L49-52) and ambient air (C25/L8)." Atwood actually teaches that the temperature of the sample block 12 (Fig. 1) is sensed by a

temperature sensor 21 (col. 25, lines 44-45), while the temperature of the heated cover 14 is sensed by another non-illustrated sensor (col. 9, lines 49-52).

The conventional CPU 20 of Atwood includes electronics to sense the temperature of the heated cover 14 and to control electric resistance heaters therein to maintain the cover 14 at a predetermined temperature (col. 9, lines 46-52). Further, the conventional CPU senses the temperature of the temperature of the sample block 12 via the sensor 21. Then, the CPU 20 measures the ambient temperature via the temperature sensor 56, while also measuring the temperature of the coolant via the temperature sensor 61 in the coolant control system 24. The CPU 20 then computes the power factor, corresponding to the particular segment of the PCR protocol being implemented, and makes three calculations in accordance with Equations (3), (4) and (5), in order to control the heating of the sample block 12 or control the coolant control system 24 (col. 25, line 44 to col. 26, line 16).

Atwood does not disclose that the amount of heat energy applied to the sample is calculated based on both the temperature of the heated cover 14 and the ambient temperature measured by the sensor 56, as required by claim 1. The Equations (3), (4) and (5), for controlling the heat energy to the sample block 12, take into consideration some factors concerning the temperature of the sample block 12, the ambient temperature by the sensor 56, and the coolant control system 24, but no factor concerning a temperature measurement by the heated cover 24 is considered. Therefore, it is clear that the CPU 20 conducts the temperature control for the heated cover 14 separately from the temperature or heat control for the sample block 12 and the coolant control system 24. Thus, this arrangement is fundamentally different from the method of claim 1, where the amount of heat energy necessary for raising the temperature is based on both the container temperature and the ambient temperature. Therefore, Atwood does not anticipate, suggest or teach the features of claim 1 and the rejection should be withdrawn.

Claims 2-9 are allowable at least by virtue of their dependence on independent claim 1 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Claim 10 is directed to a method of raising the temperature of a contained object sealed in a container, up to a predetermined temperature, by supplying heat energy to the container brought into contact with a heating block. A first step measures the ambient temperature around the container immediately before raising the temperature. A second step determines an amount of heat energy necessary for raising the temperature of the contained object up to the predetermined temperature, based on the ambient temperature.

As discussed above Atwood does not anticipate, suggest or teach the measuring of ambient temperature around the container, and the subsequent determination based on the ambient temperature. Therefore, the rejection of claim 10 should be withdrawn.

Claims 11-14 are allowable at least by virtue of their dependence on independent claim 10 or intervening dependent claims. The rejection of these dependent claims should be withdrawn. Applicants do not concede the correctness of the rejection.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

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